



Guide for developing resource- appropriate breast cancer management guidelines



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Purpose of the guide

The purpose of this guide is to outline the steps and procedures for designing a resource-appropriate breast cancer management guideline in the context of the City Cancer Challenge Foundation (C/Can) project as it is implemented at the city level. This guide is intended to respond to the urgent need to reduce inequities in access to breast cancer diagnosis (clinical evaluation, imaging, tissue sampling), multimodality treatment (surgery, radiotherapy, systemic therapy) and palliative care services in selected C/Can cities.

To create a resource-appropriate breast cancer management guideline, the guideline development team requires an accurate understanding of currently available resources (infrastructure, human resources, equipment, and renewable supplies) for breast healthcare to avoid creating a guideline that is scientifically sound but financially unsustainable. The situation assessment required to provide this baseline information is beyond the scope of this guide but is assumed to be available to the guideline development team.

Breast cancer early detection (identifying cancers when the majority of invasive cases are stages I or II) is necessary for improving breast cancer outcomes at the population level (see Annex 1). Nonetheless, this document focuses on guidelines for establishing effective breast cancer diagnosis and treatment services, which is a necessary prerequisite for cancer downstaging efforts to be effective, even when the majority of breast cancers cases are diagnosed as locally advanced (stage III) or metastatic (stage IV) disease.

The guide has been prepared through a collaboration between C/Can and Professor Benjamin O. Anderson, Chair and Director of the Breast Health Global Initiative, with the aim of supporting the different groups that are established by the cities as they prioritise the development of breast cancer management guidelines. These groups are recommended to interpret, analyse, and tailor the recommendations made in this guide considering the local context and the need to build a multisectoral consultative process within their cities.

01 | Introduction

BREAST CANCER IMPACT

- › Current and projected breast cancer burden (incidence, mortality, prevalence, DALYs lost) in the world, region and country;
- › Economic impact of breast cancer in the country and city as measured by lost productivity and social disruption related to breast cancer morbidity and deaths;
- › Potential for improved breast cancer outcomes based on early detection strategies in the country and city to reduce the fraction of patients presenting with advanced stage disease requiring more extensive and costly treatments;
- › Potential for improved breast cancer outcomes as measured by lower recurrence and higher survival rates based on the implementation of proven therapeutic strategies.

BREAST CANCER DIAGNOSIS AND TREATMENT OVERVIEW

- › Synergistic role of early detection, diagnosis and multimodality treatment to improve breast cancer outcomes;
- › Access requirements for diagnostic work-up of clinically detected breast abnormalities at the city level;
- › Diagnostic services to establish breast cancer diagnosis and clinical staging (clinical evaluation, imaging, tissue sampling, pathology) recognizing that 90% of clinically detected abnormalities (masses, thickening, focal pain, bloody nipple discharges) are benign;
- › Multimodality breast cancer treatment for non-metastatic breast cancer [surgery, radiotherapy, chemotherapy, endocrine therapy (if hormone-receptor-positive), and targeted therapies (when available)];
- › Requirement for supportive care to help patients get through multimodality treatment without abandonment;
- › Value of supportive care after treatment in survivorship to help patients reintegrate in their community;
- › Importance of palliative care for patients with metastatic disease and in end-of-life care.

PHASED IMPLEMENTATION STRATEGIC PLANNING PERSPECTIVE

- › Baseline assessment provides summary of existing diagnostic and treatment services and resources in city;
- › Resource-stratified framework outlines the core service gaps needing to be filled or circumvented in city;
- › Resource-appropriate guidelines should be both functional (biologically predictable to improve cancer outcomes) and sustainable (realistic and affordable) in order to meet the needs of the community;
- › Phased implementation strategy defines a stepwise pathway for optimizing sustainable resource-utilisation while improving service delivery for breast cancer diagnosis, treatment and palliation.

02 | Aims of the guideline document

- › Explain the purpose of the document and the potential interested audiences;
- › Consider the clinical demand for breast cancer diagnosis and treatment services based on epidemiological data and projected needs based on quality benchmarks within a determined timeframe (up to 10 years);
- › Discuss the available material resources (infrastructure, equipment and consumable materials) for breast cancer detection, diagnosis, treatment and supportive services;
- › Reflect on the current and future training requirements to have an optimally functional work force to meet the current and projected patient demand for breast cancer diagnosis and treatment;
- › Propose standardised guidelines for describing feasible interventions to bridge the early diagnosis and treatment gaps in terms of facilities, equipment and trained staff considering concepts like rational use of existing city resources and technology transfer and deployment in a stepwise approach.

3 | Objectives of the city-specific breast cancer management guideline

- › This document should guide the users in the rationale and necessity for creating breast cancer guidelines adapted to their city's context and resources;
- › The guideline should state the overall goal of the project to contribute to, and demonstrate its linkage with, a national or broader cancer control programme;
- › The guideline should align with the identified problems and needs, contributing to the expected impact;
- › The guideline document should describe the specific objectives and their links to expected outcomes;
- › The specific objectives of the guideline should address changes and effects expected with implementation;
- › The guideline document should expand on:
 - the increase of coverage in terms of equipment and personnel workload;
 - the projected improvements in the accessibility to breast cancer diagnosis and treatment services and in the quality and safety of treatments; and,
 - anticipated technology requirements and the corresponding staff training and education that will be required to deliver these projected outcomes.
- › The guideline should serve as the basis for a city-wide phased implementation strategy potentially such as a four-step "APIM" (Assess, Plan, Implement, Monitor) approach to maximise the benefits of resource-stratification by permitting situation-specific adaptation.

4 | Guideline development

GUIDELINE DEVELOPMENT TEAM MEMBERSHIP

- › Guideline development is a comprehensive process requiring the active involvement, input and ratification of all specialties and services involved in guideline implementation. Those core specialties include (at least) all of the following:
 - Surgery;
 - Radiation oncology;
 - Medical oncology;
 - Radiology (diagnostic imaging and nuclear medicine);
 - Pathology.
- › Guideline implementation is most successful when ancillary and supportive services are directly involved in the guideline development process and have the opportunity to provide input. Key supportive services include:
 - Nursing;
 - Supportive/palliative care;
 - Physical therapy;
 - Patient navigation services.
- › Guideline implementation is most likely to be sustained over time when their practical and financial implications are evaluated and vetted by those groups that will be required to continue and sustain their application over time. These administrative entities include:
 - Hospital and clinic administration;
 - Health insurers;
 - Health services oversight (ministry of health or equivalent).

GUIDELINE DEVELOPMENT PROCESS

- › A series of guideline development meetings should be planned to permit writing, review, editing and ratification of the guideline document:
 - Initial guideline drafting;
 - Internal review to consider issues of practicality of implementation;
 - Guideline revision based on internal review;
 - External expert review to evaluate predicted efficacy;
 - Guideline revision based on external review;
 - Administrative review to consider resource requirements and fiscal implications of implementation;
 - Guideline finalisation.
- › Principles of guideline development include the following:
 - Guidelines are most practical to apply when they follow an algorithmic approach mirroring the anticipated patient pathway (see Annex 1);
 - Guidelines effectiveness depends on standardisation of care; when patients receive some but not all the essential interventions, improvement in cancer outcomes cannot be expected to occur;
 - Guidelines have limited utility when they are aspirational but unachievable or unaffordable.
- › Given the complexity and extensive knowledge about breast cancer diagnosis and treatment, the guideline development team should strongly consider the use of existing resource-stratified guidelines such as the NCCN Framework for Resource Stratification of NCCN Guidelines™ (<https://www.nccn.org/framework/default.aspx>) as a starting point for guidelines development:
 - The guideline development team begins with a map of existing resources and services to determine how patients currently flow (or fail to flow) through the existing system and infrastructure;
 - The existing map of patient services permits gap analysis to identify where necessary services are missing or inadequately functional to meet service needs;
 - Resource-appropriate guidelines are useful for prioritizing improvements to be implemented to provide an orderly progression based on existing needs that target the best predicted outcomes balanced against intervention costs.

- › In **breast cancer diagnosis**, certain questions commonly arise that need to be addressed in the guideline to establish a prioritisation scheme for implementation, such as:
 - Timeliness of service access to avoid excessive delays;
 - Diagnostic imaging studies of the breast and axilla (ultrasound, mammography, etc.);
 - Staging studies to detect metastatic disease (ultrasound, CT, nuclear medicine studies);
 - Tissue sampling methods (needle biopsy vs. surgical biopsy);

- › In **breast cancer treatment**, certain questions commonly arise that need to be addressed in the guideline to establish a prioritisation scheme for implementation, such as:
 - Breast surgical management (lumpectomy vs. mastectomy);
 - Axillary surgical management (axillary dissection vs. sentinel node biopsy in selected cases);
 - Radiation therapy management (timeliness of access to indicated radiotherapy);
 - Systemic therapy options (endocrine therapy choices, chemotherapy protocols, access to targeted therapies in appropriately selected patients).

- › In **breast cancer supportive and palliative care**, certain questions commonly arise that need to be addressed in the guideline to establish a prioritisation scheme for implementation, such as:
 - Supportive care services during cancer treatment (especially those that help avoid treatment abandonment);
 - Supportive care following treatment in survivorship to assist patients in returning to their community
 - End-of-life palliative care for those patients in whom treatment has not been successful in eradicating the disease.

- › Under each package of interventions, a distinction between core and desirable elements to be included should be made to account for planning with scarce resources while complying with minimal requirements, without leaving out optimal scenarios.

5 | Conclusions: implementation, monitoring and future guidelines revisions

- › Phased implementation is an evolutionary process requiring ongoing adaptation as systems improve;
- › As implementation takes place, ongoing monitoring is required to assess the degree to which the system is improving so that next steps in each critical phase in breast cancer diagnosis and treatment can be recognised and re-prioritised;
- › Guideline revisions should be considered episodically (one to two years), based on actual outcomes.

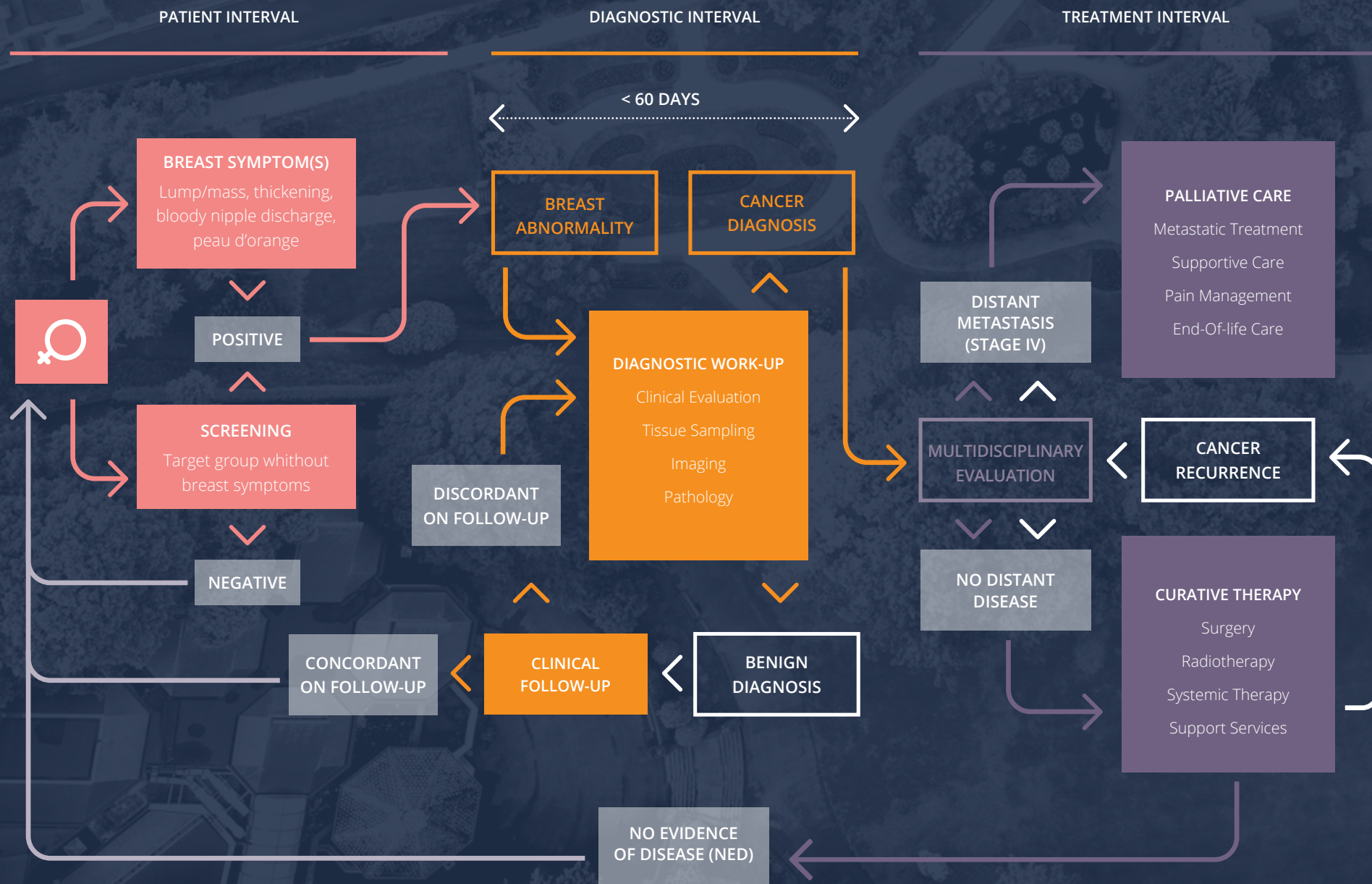
6 | Contributors

- › A detailed list of all members of the city team that contributed to the drafting of the guideline document, including the participants in the peer review meetings conducted in the city, and all the external experts that reviewed and edited the final draft.

7 | References and bibliography

- › List of all publications referenced in the breast cancer management guideline, including the reference guidelines considered by the guideline development team

Annex 1 | Universal Breast Cancer Patient Pathway



Source: Breast Health Global Initiative (BHGI), 2019. This illustration is an adaptation of the original BHGI graph. The algorithm is adapted with permission.



<https://citycancerchallenge.org/>

